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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,874	01/09/2004	Hans Joachim Halamoda	7863-80940	6117
42798	7590	06/28/2007		
FITCH, EVEN, TABIN & FLANNERY P. O. BOX 18415 WASHINGTON, DC 20036			EXAMINER NGUYEN, PHONG H	
			ART UNIT 3724	PAPER NUMBER
			MAIL DATE 06/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/753,874

Applicant(s)

HALAMODA ET AL.

Examiner

Phong H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7,9-12 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7,9-12 and 14-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. In view of new found references, the allowable subject matter of claims 1-8 and 21 are withdrawn.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### *Claim Rejections - 35 USC § 103*

3. Claims 9-12 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz (EP 64263A2) in view of Takashima et al. (US Pub. 2004/0113979), hereinafter Takashima.

Regarding claims 9, 10 and 17, Dietz teaches a punching device for making tapered holes capable of being use to punch holes on a ceramic substrate comprising: a receiving device 7, a die having a shaft 2, an operative portion having a first part 6 and a second part 14, a stripper opening 12, a drive mechanism and a die guide 8. See Figs. 2-4.

Dietz teaches the second part 14 functioning as a guide but not as a punch.

Takashima teaches an operative 5 for making a tapered hole having a first part 5c and a second punching part 5b. See Figs. 1-3.

Therefore, it would have been obvious to one skilled in the art to incorporate the second punching part as taught by Takaskima into the second part of Dietz to speed up

the process of making a tapered hole since the tapered portion and the constant diameter portion are made in one step but not two steps as taught by Diet.

Regarding claim 11, the upper portion of the punching portion is unguided in the transverse direction in a ready state as shown in Fig. 1-3.

Regarding claim 12, the die guide device 8 having a bush (upper portion of element 5) with a passage 27 is best seen in Figs. 1-3.

Regarding claim 16, it appears that the length of the operative portion is greater than the stroke of the drive mechanism. See Fig. 1.

Regarding claims 18-20, Dietz teaches a tool for punching a sheet like substrate comprising:

- a lower tool part 7 having a flat receiving face for a substrate;

- an upper tool part;

- a die having a shaft 2, a graduated operative portion including a first part 6 and a second part 14, a linear guide 8, a stripper bush 5 having a constant diameter stripper opening 12; and

- a drive mechanism 10. See Figs. 1-3.

Dietz teaches the second part 14 functioning as a guide but not as a punch.

Takashima teaches an operative 5 for making a tapered hole having a first part 5c and a second punching part 5b. See Figs. 1-3.

Therefore, it would have been obvious to one skilled in the art to incorporate the second punching part as taught by Takaskima into the second part of Dietz to speed up

the process of making a tapered hole since the tapered portion and the constant diameter portion are made in one step but not two steps as taught by Diet.

4. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz (EP 64263A2) in view of Saito (5,848,563) and Takashima et al. (US Pub. 2004/0113979), hereinafter Takashima.

Regarding claim 1, Dietz teaches a punching device capable of punching holes on a ceramic substrate comprising:

a receiving device 7, which has a substantially flat receiving face for a ceramic substrate 11, and in which a punched hole is embodied;

at least one die, which disposed above a punched hole and has a shaft 2 and an operative portion (6 and 14) that extends through a stripper opening 12, which is disposed in a stripper above the associated respective punched hole and extends to an outer face of the stripper facing the receiving face, and with the operative portion having a first part 6 with a diameter that is less than the diameter of the shaft by a multiple of the diameter of the first part and greater than the diameter of an associated punched hole, and the first part of the operative portion, at its lower end, has a punching portion 14 whose diameter is somewhat less than the diameter of the punched hole and whose length is less than the length of the stripper opening;

a drive mechanism, which is connected in driving fashion to the die in order to move linearly by a defined stroke and in the process to move the punching portion into the punched hole and out of it; and a die guide device 8, through which the shaft extends and which guides the die at its shaft. See Figs. 1-4.

Dietz is silent whether the receiving device having a plurality of punched holes. Saito teaches a receiving device having a plurality of punched holes for accommodating different punch sizes. See Figs. 2 and 3.

Therefore, it would have been obvious to one skilled in the art to provide a plurality of punched holes as taught by Saito in the receiving device of Dietz for accommodating different punch sizes.

Dietz teaches the second part 14 functioning as a guide but not as a punch.

Takashima teaches an operative 5 for making a tapered hole having a first part 5c and a second punching part 5b. See Figs. 1-3.

Therefore, it would have been obvious to one skilled in the art to incorporate the second punching part as taught by Takashima into the second part of Dietz to speed up the process of making a tapered hole since the tapered portion and the constant diameter portion are made in one step but not two steps as taught by Diet.

Regarding claim 2, the upper portion of the punching portion is unguided in the transverse direction in a ready state as shown in Fig. 1-3.

Regarding claim 3, the die guide device 8 having a bush (upper portion of element 5) with a passage 27 is best seen in Figs. 1-3.

Regarding claims 5, 14 and 15, the modified punching assembly of Dietz teaches the invention substantially as claimed except for the length of the punching is equal to the length of the stroke of the drive. At the time the invention was made, choosing the length of the punching stroke is well known in the art since the length of the punching stroke depends on the length of the punching portion, the thickness of the workpiece and the distance between the tip of the punching portion and the workpiece. Therefore, it would have been obvious to one skilled in the art to select a stroke length equal to the length of the punching portion since such practice is well known in the art.

Regarding claim 6, the stroke length is the distance between the extreme down end of the punching 14 and the bottom surface of workpiece 11. The operative portion length is sum of the lengths of the first part 6 and the second punching part 14. It appears that the length of the operative portion is greater than the stroke length of the drive mechanism. See Fig. 1.

Regarding claim 7, the punched hole and a slug conduit having a greater diameter than the punched hole are best seen in Figs. 1-3.

Regarding claim 8, the diameter of the shaft 2 is a multiple of the diameter of the first part 14 of the operative portion. See Fig. 1.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takeuchi et al. teach a punch for making a tapered hole of general interest.

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6. Applicant's amendment dated 08/18/2006 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phong H. Nguyen whose telephone number is 571-272-4510. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on 571-272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For



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more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Timothy V. Eley/  
Primary Examiner, A.U. 3724

PN:

A handwritten signature in black ink, appearing to be the letters 'm' or 'n' with a stylized flourish.

June 21, 2007